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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Kroczek

Application No.: To be assigned	Group Art Unit: To be assigned
Filed: Herewith	Examiner: To be assigned
For: METHODS FOR TREATMENT OF ASTHMATIC DISORDERS (as amended)	Attorney Docket No.: 7853-240

PRELIMINARY AMENDMENT UNDER 37 C.F.R. § 1.115

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with Rule 115 of the Rules of Practice, please enter the amendments made herein and consider the following remarks.

Applicant submits herewith: 1) a marked up version of the amended paragraphs in the specification, attached hereto as Exhibit A; 2) a copy of the claims as will be pending following entry of the amendments made herein, attached hereto as Exhibit B; 3) an Information Disclosure Statement, accompanied by a revised PTO Form 1449; 4) a Sequence Listing in paper and computer readable form, accompanied by a Transmittal of Sequence Listing; and 5) a Declaration of Richard Kroczek Under 37 C.F.R. § 1.132, attached hereto as Exhibit C.

It is estimated that no additional fee is necessary for filing this amendment. In the event an additional fee is required, please charge the required fee to Pennie & Edmonds LLP Deposit Account No. 16-1150.

IN THE TITLE

Please replace the title with the following: "METHODS FOR TREATMENT OF ASTHMATIC DISORDERS".

IN THE SPECIFICATION

Please amend the specification, as follows:

On page 1, after the title, insert the following section and subsequent section heading:

Cross Reference To Related Applications

This application claims priority to U.S. patent application Serial No. 09/509,283, filed August 11, 2000, which claims priority to PCT Application PCT/DE98/02896, filed September 23, 1998, and German Applications DE 19821060.4, filed May 11, 1998, and DE 19741929.1, filed September 23, 1997, each of which is incorporated herein by reference in its entirety.

Background of the Invention

On page 3, line 37, before "There is thus," insert the following heading:

Summary of the Invention

On page 9, lines 8-9, replace the paragraph reading "The figures serve to illustrate the invention." with the following heading:

Brief Description of the Drawings

IN THE CLAIMS

Please amend the claims, as follows:

Cancel claims 1-52 without prejudice.

Add new claims 53-59, as follows:

53. (New) A method for treating an asthmatic disorder, comprising: administering to an individual in need of treatment an 8F4 inhibitory molecule selected from the group consisting of an 8F4 polypeptide and a monoclonal antibody that recognizes a human 8F4 polypeptide, wherein said 8F4 polypeptide:

a) is an inducible T cell costimulatory molecule;

b) occurs on two-signal-activated human T lymphocytes;

c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and

d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,

in an amount sufficient to ameliorate a symptom of the asthmatic disorder, such that the asthmatic disorder is treated.

54. (New) The method of claim 53, wherein the 8F4 inhibitory molecule is a monoclonal antibody that recognizes a human 8F4 polypeptide.

55. (New) The method of Claim 54, wherein the monoclonal antibody recognizes the human 8F4 polypeptide of about 55 kilodaltons to 60 kilodaltons, as determined by non-reducing SDS-PAGE.

56. (New) The method of Claim 54, wherein the monoclonal antibody recognizes the peptide chain of about 27 kilodaltons, as determined by reducing SDS-PAGE.

57. (New) The method of Claim 54, wherein the monoclonal antibody recognizes the peptide chain of about 29 kilodaltons, as determined by reducing SDS-PAGE.

58. (New) The method of Claim 54, wherein the monoclonal antibody recognizes a human 8F4 polypeptide present on activated human $CD4^+$ T lymphocytes and activated human $CD8^+$ T lymphocytes.

59. (New) The method of claim 53, wherein the 8F4 inhibitory molecule is an 8F4 polypeptide.

REMARKS

The title has been amended to more specifically describe the elected subject matter. The specification has also been amended to correct the priority information of the

present application and provide section headings where appropriate. A marked up version of the amended sections of the specification showing the amendments made herein is attached hereto as Exhibit A. In Exhibit A, the addition of matter is indicated by bold text in view of the fact that the section headings are intended to be underlined in the text of the specification. The amendments to the specification do not introduce new matter as defined in 35 U.S.C. § 132.

Claims 1-20 have been canceled without prejudice to Applicants' right to prosecute the subject matter of the canceled claims in related applications. New claims 53-59 have been added to more particularly point out and distinctly claim that which Applicant regards as the invention. The new claims are fully supported by the instant specification (see, *e.g.*, page 1, lines 10-17, page 4, line 31 to page 5, line 7, page 7, lines 1-46, page 8, lines 38-42, and the examples presented at pages 11-24), and do not represent new subject matter. After entry of the amendments made herein, claims 53-59 will be pending in the instant application. A copy of the pending claims is attached hereto as Exibit B.

Claims 53-59 are drawn to methods of treating an asthmatic disorder, comprising administering an 8F4[1] inhibitory molecule, such as a monoclonal antibody that recognizes the human 8F4 polypeptide or an 8F4 polypeptide, to an individual in need of such treatment. Applicant submits herewith a Declaration of Richard Kroczek Under 37 C.F.R. § 1.132 ("Kroczek Declaration"; Exhibit C), presenting data that corroborates the teachings of the instant application relating to the presently claimed invention.

The Kroczek Declaration describes, first, a study conducted by Gonzalo *et al.* (2001, "ICOS is critical for T helper cell-mediated lung mucosal inflammatory responses," Nat. Immunol. 2(7):597-604) demonstrating that administration of ICOS-inhibitory compounds, including an antibody that recognizes ICOS and a soluble ICOS polypeptide, results in abrogation of symptoms of asthma in an art-accepted mouse model of the disease (see ¶¶ 6 to 11 of the Kroczek Declaration). In addition to the data generated in an art-accepted model, the Kroczek Declaration, in paragraphs 12 to 14, further describes

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[1] It is noted that since the original filing date of the instant specification, the 8F4 polypeptide has come to be referred to in the literature as "ICOS" (Inducible T cell CO-Stimulator). As such, throughout this Amendment, Applicant will generally refer to 8F4 as "ICOS."

experiments demonstrating that in humans ICOS-expressing cells are associated with lung inflammation resulting in asthma. The Kroczek Declaration, therefore, presents mouse and human data corroborating the teachings of the present application that successful *in vivo* amelioration of asthma symptoms can be achieved by administration of antibodies that recognize the human ICOS gene product or the ICOS gene product itself.

Entry of the amendments and remarks made herein is respectfully requested.

Respectfully submitted,

Date October 4, 2001

Laura A. Coruzzi 30,742
Laura A. Coruzzi (Reg. No.)

By: Muna Abu-Shaar
Muna Abu-Shaar
Limited Recognition Under 37 C.F.R. § 10.9(b)
Copy of Certificate Enclosed

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Enclosures